

CUMULATIVE INDEXES

CONTRIBUTING AUTHORS, VOLUMES 6-10

A

Akil, H., 7:223-55
Alexander, G. E., 9:357-81
Allman, J., 8:407-30
Arnold, A. P., 7:413-42
Augustine, G. J., 10:633-93

B

Basbaum, A. I., 7:309-38
Bennett, G. J., 6:381-418
Berg, D. K., 7:149-70
Berger, T. W., 6:447-91
Bjorklund, A., 7:279-308
Blumberg, S., 9:415-34
Boothe, R., 8:495-545
Breakfield, X. O., 10:535-94
Brownstein, M. J., 7:189-222
Bunge, M. B., 9:305-28
Bunge, R. P., 9:305-28

C

Cambi, F., 10:535-94
Carew, T. J., 9:435-87
Carlsson, A., 10:19-40
Charlton, M. P., 10:633-93
Choe, S., 9:383-413
Cooper, K. E., 10:297-326
Costa, E., 9:277-304
Creese, L., 6:43-71
Crews, D., 8:457-94

D

Damasio, A. R., 7:127-47
DeLong, M. K., 9:357-81
De Souza, E. B., 9:27-59
DeVito, J., 7:43-65
DiScenna, P., 10:131-61
Dobson, V., 8:495-545
Dubner, R., 6:381-418
Du Lac, S., 10:41-65

E

Earnest, J. P., 9:383-413
Edelman, G. M., 7:339-77
Eldridge, C. F., 9:305-28
Estery, S. D., 10:41-65

F

Fields, H. L., 7:309-38
Foote, S. L., 10:67-95
Friedhoff, A. J., 6:121-48
Fuchs, A. F., 8:307-37

G

Gainer, H., 7:189-222
Gallager, D. W., 8:21-44
Georgopoulos, A. P., 9:147-70
Geschwind, N., 7:127-47
Gilbert, C. D., 6:217-47
Goldin, S. M., 6:419-46
Gorsky, R. A., 7:413-42
Green, J. P., 9:209-54
Greenberg, S. M., 10:459-76
Greenspan, R. J., 7:67-93
Grillner, S., 8:233-61
Grinvald, A., 8:263-305

H

Halpern, M., 10:325-62
Hamblin, M. W., 6:43-71
Hildreth, E. C., 10:477-533
Hudspeth, A. J., 6:187-215

I

Imig, T. J., 6:95-120
Ingle, D., 8:457-94
Iverson, L. E., 9:255-76

J

Jacobson, M., 8:71-102
Jasper, H. H., 6:1-42

K

Kaas, J. H., 6:325-56
Kaissling, K. E., 9:121-45
Kaldany, R. R. J., 8:431-55
Kamb, C. A., 9:255-76
Kaneko, C. R. S., 8:307-37
Kennedy, M. B., 6:493-525
Khachaturian, H., 7:223-55
Killackey, H. P., 6:325-56
Knudsen, E. I., 10:41-65

Koch, C., 10:477-533
Konishi, M., 8:125-70
Krystal, J. H., 7:443-78
Kuhar, M. J., 9:27-59

L

Lancet, D., 9:329-55
Leff, S. E., 6:43-71
Lennie, P., 8:547-83
Lewis, M. E., 7:223-55
Lisberger, S. G., 10:97-129
Loh, Y. P., 7:189-222

M

Madden, J. IV, 6:447-91
Marangos, P. J., 10:269-95
Matthews, P. B. C., 5:189-218
Maunsell, J. H. R., 10:363-401
McCarthy, M. P., 9:383-413
McGuinness, E., 8:407-30
McKay, R. D. G., 6:527-46
McKelvy, J. F., 9:415-34
Merzenich, M. M., 6:325-56
Miezin, F., 8:407-30
Miller, J. C., 6:121-48
Moczydlowski, E. G., 6:419-46
Moody, W. Jr., 7:257-78
Morel, A., 6:95-120
Morris, E. J., 10:97-129
Morrison, J. H., 10:67-95

N

Nambu, J. R., 8:431-55
Nathans, J., 10:163-94
Nathanson, N. M., 10:195-236
Newsome, W. T., 10:195-236
Norgren, R. E., 10:595-632

O

O'Shea, M., 8:171-98

P

Papazian, D. M., 6:419-46
Penney, J. B. Jr., 6:73-94
Poggio, G. F., 7:379-412
Poggio, T., 7:379-412

CUMULATIVE INDEXES

CONTRIBUTING AUTHORS, VOLUMES 6-10

A

Akil, H., 7:223-55
Alexander, G. E., 9:357-81
Allman, J., 8:407-30
Arnold, A. P., 7:413-42
Augustine, G. J., 10:633-93

B

Basbaum, A. I., 7:309-38
Bennett, G. J., 6:381-418
Berg, D. K., 7:149-70
Berger, T. W., 6:447-91
Bjorklund, A., 7:279-308
Blumberg, S., 9:415-34
Boothe, R., 8:495-545
Breakfield, X. O., 10:535-94
Brownstein, M. J., 7:189-222
Bunge, M. B., 9:305-28
Bunge, R. P., 9:305-28

C

Cambi, F., 10:535-94
Carew, T. J., 9:435-87
Carlsson, A., 10:19-40
Charlton, M. P., 10:633-93
Choe, S., 9:383-413
Cooper, K. E., 10:297-326
Costa, E., 9:277-304
Creese, L., 6:43-71
Crews, D., 8:457-94

D

Damasio, A. R., 7:127-47
DeLong, M. K., 9:357-81
De Souza, E. B., 9:27-59
DeVito, J., 7:43-65
DiScenna, P., 10:131-61
Dobson, V., 8:495-545
Dubner, R., 6:381-418
Du Lac, S., 10:41-65

E

Earnest, J. P., 9:383-413
Edelman, G. M., 7:339-77
Eldridge, C. F., 9:305-28
Estery, S. D., 10:41-65

F

Fields, H. L., 7:309-38
Foote, S. L., 10:67-95
Friedhoff, A. J., 6:121-48
Fuchs, A. F., 8:307-37

G

Gainer, H., 7:189-222
Gallager, D. W., 8:21-44
Georgopoulos, A. P., 9:147-70
Geschwind, N., 7:127-47
Gilbert, C. D., 6:217-47
Goldin, S. M., 6:419-46
Gorsky, R. A., 7:413-42
Green, J. P., 9:209-54
Greenberg, S. M., 10:459-76
Greenspan, R. J., 7:67-93
Grillner, S., 8:233-61
Grinvald, A., 8:263-305

H

Halpern, M., 10:325-62
Hamblin, M. W., 6:43-71
Hildreth, E. C., 10:477-533
Hudspeth, A. J., 6:187-215

I

Imig, T. J., 6:95-120
Ingle, D., 8:457-94
Iverson, L. E., 9:255-76

J

Jacobson, M., 8:71-102
Jasper, H. H., 6:1-42

K

Kaas, J. H., 6:325-56
Kaissling, K.-E., 9:121-45
Kaldany, R.-R. J., 8:431-55
Kamb, C. A., 9:255-76
Kaneko, C. R. S., 8:307-37
Kennedy, M. B., 6:493-525
Khachaturian, H., 7:223-55
Killackey, H. P., 6:325-56
Knudsen, E. I., 10:41-65

Koch, C., 10:477-533
Konishi, M., 8:125-70
Krystal, J. H., 7:443-78
Kuhar, M. J., 9:27-59

L

Lancet, D., 9:329-55
Leff, S. E., 6:43-71
Lennie, P., 8:547-83
Lewis, M. E., 7:223-55
Lisberger, S. G., 10:97-129
Loh, Y. P., 7:189-222

M

Madden, J. IV, 6:447-91
Marangos, P. J., 10:269-95
Matthews, P. B. C., 5:189-218
Maunsell, J. H. R., 10:363-401
McCarthy, M. P., 9:383-413
McGuinness, E., 8:407-30
McKay, R. D. G., 6:527-46
McKelvy, J. F., 9:415-34
Merzenich, M. M., 6:325-56
Miezin, F., 8:407-30
Miller, J. C., 6:121-48
Moczydlowski, E. G., 6:419-46
Moody, W. Jr., 7:257-78
Morel, A., 6:95-120
Morris, E. J., 10:97-129
Morrison, J. H., 10:67-95

N

Nambu, J. R., 8:431-55
Nathans, J., 10:163-94
Nathanson, N. M., 10:195-236
Newsome, W. T., 10:195-236
Norgren, R. E., 10:595-632

O

O'Shea, M., 8:171-98

P

Papazian, D. M., 6:419-46
Penney, J. B. Jr., 6:73-94
Poggio, G. F., 7:379-412
Poggio, T., 7:379-412

Poo, M.-m., 8:369-406
 Prell, G. D., 9:209-54
 Price, D. L., 9:489-512
 Prichard, J. W., 9:61-85

Q

Quinn, W. G., 7:67-93

R

Raichle, M. E., 6:249-67
 Rando, T., 10:237-67
 Redmond, D. E. Jr., 7:443-78
 Reichardt, L. F., 8:199-232
 Role, L., 10:403-457

S

Sahley, C. L., 9:435-87
 Salkoff, L., 9:255-76
 Sawchenko, P. E., 6:269-324
 Schaffer, M., 8:171-98
 Scharrer, B., 10:1-17
 Scheller, R. H., 8:431-55
 Schmechel, D. E., 10:269-95
 Schuetze, S. M., 10:403-57
 Schwartz, E. A., 8:339-67
 Schwartz, J. H., 10:459-76
 Schwartz, J. P., 9:277-304
 Scudder, C. A., 8:307-37

Shapley, R., 8:547-83
 Shatz, C. J., 9:171-207
 Shulman, R. G., 9:61-85
 Sibley, D. R., 6:43-71
 Silverman, A.-J., 6:357-80
 Simpson, J. I., 7:13-41
 Smith, S. J., 10:633-93
 Smith, O. A., 7:43-65
 Snyder, S. H., 8:103-24
 Sourkes, T. L., 6:1-42
 Sreterevan, D. W., 9:171-207
 Stein, B. E., 7:95-125
 Stenevi, U., 7:279-308
 Stent, G. S., 8:45-70
 Sterling, P., 6:149-85
 Strichartz, G. R., 10:237-67
 Strick, P. L., 9:357-81
 Stroud, R. M., 9:383-413
 Stryer, L., 9:87-119
 Swanson, L. W., 6:269-324
 Szentágothai, J., 7:1-11

T

Tallman, J. F., 8:21-44
 Tanouye, M. A., 9:255-76
 Teller, D., 8:495-545
 Teyler, T. J., 10:131-61
 Thompson, R. F., 6:447-91
 Travers, J. B., 10:595-632
 Travers, S. P., 10:595-632

Truman, J. W., 7:171-88
 Tychsen, L., 10:97-129

U

Ullman, S., 9:1-26
 Unnerstall, J. R., 9:27-59

V

Valentino, K. L., 8:199-232

W

Walker, J. M., 7:223-55
 Wallén, P., 8:233-61
 Wang, G. K., 10:237-67
 Watson, S. J., 7:223-55
 Weisblat, D. A., 8:45-70
 Winter, J., 8:199-232
 Wise, S. P., 8:1-19

Y

Young, A. B., 6:73-94
 Young, E., 7:223-55
 Young, E. F., 9:383-413

Z

Zimmerman, E. A., 6:357-80

CHAPTER TITLES, VOLUMES 6-10

AUDITORY SYSTEM

- | | | |
|----------------------------------------------------------------------------------------|----------------------|-----------|
| Organization of the Thalamocortical Auditory System in the Cat | T. J. Imig, A. Morel | 6:95-120 |
| Mechanoelectrical Transduction by Hair Cells in the Acousticcolateralis Sensory System | A. J. Hudspeth | 6:187-215 |

AUTONOMIC NERVOUS SYSTEM

- | | | |
|-------------------------------------------------------------------------------------------|---------------------------|---------|
| Central Neural Integration for the Control of Autonomic Responses Associated with Emotion | O. A. Smith, J. L. DeVito | 7:43-65 |
|-------------------------------------------------------------------------------------------|---------------------------|---------|

BASAL GANGLIA

- | | | |
|--------------------------------------------------------------------------------------------|---------------------------------------------|----------|
| Speculations on the Functional Anatomy of Basal Ganglia Disorders | J. B. Penney, Jr., A. B. Young | 6:73-94 |
| Parallel Organization of Functionally Segregated Circuits Linking Basal Ganglia and Cortex | G. E. Alexander, M. R. DeLong, P. L. Strick | 9:357-81 |

CEREBRAL CORTEX

- | | | |
|-----------------------------------------------|-----------------------------|----------|
| Extrathalamic Modulation of Cortical Function | S. L. Foote, J. H. Morrison | 10:67-95 |
|-----------------------------------------------|-----------------------------|----------|

CLINICAL NEUROSCIENCE

- | | | |
|------------------------------------------------------------|-----------------------------------|------------|
| Clinical Implications of Receptor Sensitivity Modification | A. J. Friedhoff, J. C. Miller | 6:121-48 |
| Positron Emission Tomography | M. E. Raichle | 6:249-67 |
| The Neural Basis of Language | A. R. Damasio, N. Geschwind | 7:127-47 |
| Multiple Mechanisms of Withdrawal from Opioid Drugs | D. E. Redmond, Jr., J. H. Krystal | 7:443-78 |
| New Perspectives on Alzheimer's Disease | D. L. Price | 9:489-512 |
| The Neurobiology of Fever: Thoughts on Recent Developments | K. E. Cooper | 10:297-326 |
| Molecular Genetic Insights into Neurologic Diseases | X. O. Breakefield, F. Cambi | 10:535-94 |

COMPUTATIONAL APPROACHES TO NEUROSCIENCE

- | | | |
|-----------------------------------------------------------------------------------|-------------------------|------------|
| Artificial Intelligence and the Brain: Computational Studies of the Visual System | S. Ullman | 9:1-26 |
| The Analysis of Visual Motion: From Computational Theory to Neuronal Mechanisms | E. C. Hildreth, C. Koch | 10:477-533 |

DEVELOPMENTAL NEUROBIOLOGY

- | | | |
|-------------------------------------------------------------------------------------------------------------|-----------------------------|----------|
| New Neuronal Growth Factors | D. K. Berg | 7:149-70 |
| Cell Death in Invertebrate Nervous Systems | J. W. Truman | 7:171-88 |
| Modulation of Cell Adhesion During Induction, Histogenesis, and Perinatal Development of the Nervous System | G. M. Edelman | 7:339-77 |
| Cell Lineage in the Development of Invertebrate Nervous Systems | G. S. Stent, D. A. Weisblat | 8:45-70 |
| Clonal Analysis and Cell Lineages of the Vertebrate Central Nervous System | M. Jacobson | 8:71-102 |

HYPOTHALAMUS

- | | | |
|-------------------------------------------------------------------------------------|----------------------------------|-----------|
| Hypothalamic Integration: Organization of the Paraventricular and Supraoptic Nuclei | L. W. Swanson, P. E. Sawchenko | 6:269-324 |
| Magnocellular Neurosecretory System | A.-J. Silverman, E. A. Zimmerman | 6:357-80 |

ION CHANNELS

Isolation and Reconstitution of Neuronal Ion Transport Proteins

S. M. Goldin, E. G. Moczydlowski,
D. M. Papazian 6:419-46Effects of Intracellular H^+ on the Electrical Properties of Excitable Cells

W. Moody, Jr. 7:257-78

Genetics and Molecular Biology of Ionic Channels in *Drosophila*M. A. Tanouye, C. A. Kamb, L.
E. Iverson L. Salkoff 9:255-76

LEARNING AND MEMORY

Cellular Processes of Learning and Memory in the Mammalian CNS

R. F. Thompson, T. W. Berger,
J. Madden IV 6:447-91Learning and Courtship in *Drosophila*: Two Stories with Mutants

W. G. Quinn, R. J. Greenspan 7:67-93

Invertebrate Learning and Memory: From Behavior to Molecule

T. J. Carew, C. L. Sahley 9:435-87

Long-Term Potentiation

T. J. Teyler, P. DiScenna 10:131-61

Molecular Mechanisms for Memory:

Second-Messenger Induced Modifications of Protein Kinases in Nerve Cells

J. H. Schwartz, S. M. Greenberg 10:459-76

MEMBRANE RECEPTORS

The Classification of Dopamine Receptors: Relationship to Radioligand Binding

I. Creese, D. R. Sibley,
M. W. Hamblin, S. E. Leff 6:43-71

MOLECULAR NEUROSCIENCE

Molecular Biology of Visual Pigments

J. Nathans 10:163-94

Molecular Properties of the Muscarinic

Acetylcholine Receptor

N. M. Nathanson 10:195-236

Neuron Specific Enolase, a Clinically Useful Marker for Neurons and Neuroendocrine Cells

P. J. Marangos, D. E. Schmechel 10:269-95

Molecular Mechanisms for Memory:

Second-Messenger Induced Modifications of Protein Kinases in Nerve Cells

J. H. Schwartz, S. M. Greenberg 10:459-76

MOTOR SYSTEMS

The GABAergic System: A Locus of Benzodiazepine Action

J. F. Tallman, D. W. Gallager 8:21-44

The Primate Premotor Cortex: Past, Present, and Preparatory

S. P. Wise 8:1-19

Central Pattern Generators for Locomotion,

with Special Reference to Vertebrates

S. Grillner, P. Wallén 8:233-61

Brainstem Control of Saccadic Eye Movements

A. F. Fuchs, C. R. S. Kaneko, C.
A. Scudder 8:307-37

On Reaching

A. P. Georgopoulos 9:147-70

MYELIN

Linkage Between Axonal Ensheathment and Basal Lamina Production by Schwann Cells

R. P. Bunge, M. B. Bunge, C. F.
Eldridge 9:305-28

NERVE IMPULSE AXONOLOGY

An Integrated View of the Molecular

Toxinology of Sodium Channel Gating in Excitable Cells

G. Strichartz, T. Rando, G. K.
Wang 10:237-67

714 CHAPTER TITLES

NEUROENDOCRINOLOGY

- Gonadal Steroid Induction of Structural Sex Differences in the Central Nervous System A. P. Arnold, R. A. Gorski 7:413-42

NEUROETHOLOGY

- Learning and Courtship in *Drosophila*: Two Stories with Mutants W. G. Quinn, R. J. Greenspan 7:67-93
Birdsong: From Behavior to Neuron M. Konishi 8:125-70
Vertebrate Neuroethology D. Ingle, D. Crews 8:457-94

NEURONAL MEMBRANES

- Mobility and Localization of Proteins in Excitable Proteins M.-m. Poo 8:369-406

NEUROPEPTIDES

- Proteolysis in Neuropeptide Processing and Other Neural Functions Y. P. Loh, M. J. Brownstein, H. Gainer 7:189-222
Endogenous Opioids: Biology and Function H. Akil, S. J. Watson, E. Young, M. E. Lewis, H. Khachaturian, J. M. Walker 7:223-55
Neuropeptide Function: The Invertebrate Contribution M. O'Shea, M. Schaffer 8:171-98
Neuropeptides in Identified *Aplysia* Neurons R.-R. J. Kaldany, J. R. Nambu, R. H. Scheller 8:431-55
Hybridization Approaches to the Study of Neuropeptides J. P. Schwartz, E. Costa 9:277-304
Inactivation and Metabolism of Neuropeptides J. F. McKelvy, S. Blumberg 9:415-34

NEURONAL PLASTICITY

- Intracerebral Neural Implants: Neuronal Replacement and Reconstruction of Damaged Circuitries A. Björklund, U. Stenevi 7:279-308

NEUROSCIENCE TECHNIQUES

- Molecular Approaches to the Nervous System R. D. G. McKay 6:527-46
Applications of Monoclonal Antibodies to Neuroscience Research K. L. Valentino, J. Winter, L. F. Reichardt 8:199-232
Real-Time Optical Mapping of Neuronal Activity: From Single Growth Cones to the Intact Mammalian Brain A. Grinvald 8:263-305
Neurotransmitter Receptor Mapping by Autoradiography and Other Methods M. J. Kuhar, E. B. De Souza, J. R. Unnerstall 9:27-59
NMR Spectroscopy of Brain Metabolism In Vivo J. W. Prichard, R. G. Shulman 9:61-85

OLFACTION/TASTE

- The Organization and Function of the Vomeronasal System M. Halpern 10:325-401
Gustatory Neural Processing in the Hindbrain J. B. Travers, S. P. Travers, R. Norgren 10:595-632

PAIN

- Endogenous Pain Control Systems: Brainstem Spinal Pathways and Endorphin Circuitry A. I. Basbaum, H. L. Fields 7:309-38

PREFATORY CHAPTER

- Nobel Laureates in Neuroscience: 1904-1981 H. H. Jasper, T. L. Sourkes 6:1-42
Downward Causation? J. Szentágothai 7:1-11
Neuroscience: Beginnings and New Directions in Neuropeptide Research B. Scharer 10:1-17

CHAPTER TITLES 715

Perspectives on the Discovery of Central Monoaminergic Neurotransmission	A. Carlsson	10:19-40
SENSORY SYSTEM		
Insect Olfactory Receptors	K.-E. Kaissling	9:121-45
Vertebrate Olfactory Reception	D. Lancet	9:329-55
SOMATOSENSORY SYSTEM		
Morphology of Cutaneous Receptors	A. Iggo, K. H. Andres	5:1-31
Signaling of Kinesthetic Information by Peripheral Receptors	P. R. Burgess, J. Y. Wei, F. J. Clark	5:171-87
Where Does Sherrington's Muscular Sense Originate? Muscles, Joints, Corollary Discharges?	P. B. C. Matthews	5:189-218
The Reorganization of the Somatosensory Cortex Following Peripheral Nerve Damage in Adult and Developing Mammals	J. H. Kaas, M. M. Merzenich, H. P. Killackey	6:325-56
Spinal and Trigeminal Mechanisms of Nociception	R. Dubner, G. J. Bennett	6:381-418
SYNAPSES		
Calcium Action in Synaptic Transmitter Release	G. J. Augustine, M. P. Charlton, S. J. Smith	10:633-93
TRANSMITTER BIOCHEMISTRY		
Experimental Approaches to Understanding the Role of Protein Phosphorylation in the Regulation of Neuronal Function	M. B. Kennedy	6:493-525
Adenosine as a Neurotransmitter	S. H. Snyder	8:103-24
Histamine as a Neuroregulator	G. D. Prell, J. P. Green	9:209-54
The Molecular Neurobiology of the Acetylcholine Receptor	M. P. McCarthy, J. P. Earnest, E. F. Young, S. Choe, R. M. Stroud	9:383-413
Developmental Regulation of Nicotinic Acetylcholine Receptors	S. M. Schuetze, L. W. Role	10:403-57
VISION AND HEARING		
Computational Maps in the Brain	E. I. Knudsen, S. du Lac, S. D. Esterly	10:41-65
VISUAL SYSTEM		
Microcircuitry of the Cat Retina	P. Sterling	6:149-85
Microcircuitry of the Visual Cortex	C. D. Gilbert	6:217-47
The Accessory Optic System	J. I. Simpson	7:13-41
Development of the Superior Colliculus	B. E. Stein	7:95-125
The Analysis of Stereopsis	G. F. Poggio, T. Poggio	7:379-412
Phototransduction in Vertebrate Rods	E. A. Schwartz	8:339-67
Spatial Frequency Analysis in the Visual System	R. Shapley, P. Lennie	8:547-83
Postnatal Development of Vision in Human and Nonhuman Primates	R. Boothe, V. Dobson, D. Teller	8:495-545
Stimulus-Specific Responses from Beyond the Classical Receptive Field: Neurophysiological Mechanisms for Local-Global Comparisons in Visual Neurons	J. Allman, F. Miezin, E. McGuinness	8:407-30
Interactions Between Retinal Ganglion Cells During the Development of the Mammalian Visual System	C. J. Shatz, D. W. Sretavan	9:171-207

716 CHAPTER TITLES

The Cyclic GMP Cascade of Vision	L. Stryer	9:87-119
Visual Motion Processing and Sensory-Motor Integration for Smooth Pursuit Eye Movements	S. G. Lisberger, E. J. Morris, L. Tychsen	10:97-129
Molecular Biology of Visual Pigments	J. Nathans	10:163-94
Visual Processing in Monkey Extrastriate Cortex	J. H. R. Maunsell, W. T. Newsome	10:363-401
The Analysis of Visual Motion: From Computational Theory to Neuronal Mechanisms	E. C. Hildreth, C. Koch	10:477-533

